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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/942,153	08/29/2001	Masayoshi Shiga	P/1250-214	6816

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EXAMINER	
MOORE, KARLA A	

ART UNIT	PAPER NUMBER
1763	

DATE MAILED: 06/19/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application N .	Applicant(s)	
	09/942,153	SHIGA ET AL.	
	Examiner	Art Unit	
	Karla Moore	1763	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period f r Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 March 2003* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,4-10,12-14 and 17-21* is/are pending in the application.

4a) Of the above claim(s) *7 and 8* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,4-6,9,10,12-14 and 17-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,256,204 to Wu.

3. Wu discloses a substrate processing apparatus successively transporting a substrate between a plurality of processing parts (Figure 2, 20) thereby performing a prescribed processing on said substrate, comprising: a transport robot (50; column 6, row 67 – column 7, row 13) successively transporting said substrate between said plurality of processing parts along a prescribed procedure; and a plurality pf inspection parts (column 5, rows 31-37) of different contents respectively, provided in said substrate processing apparatus.

4. Examiner notes that the limitations drawn to the exact number of substrates transported to the inspection units are not structural limitations, but method limitations. The apparatus of Wu would be capable of transporting less than a whole set of processing parts to each of the inspection unit were the process sequence changed for any of the wafers (column 11, rows 26-31). The courts have ruled that a claim containing a "recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus" if the prior art apparatus teaches all the structural limitations of the claim. Ex parte Masham, 2 USPQ2d 1647 (Bd. Pat. App. & Inter. 1987).

5. Claims 1 and 4-6 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,695,564 to Imahashi.

6. Imahashi discloses a substrate processing apparatus successively transporting a substrate between a plurality of processing parts (Figure 8; column 14, rows 6-11) thereby performing a prescribed processing on said substrate, comprising: a transport robot (U2a, U2b, U2c, U2d) successively transporting said substrate between said plurality of processing parts along a prescribed procedure; and a plurality pf inspection parts (U3a, U3d, U3c) of different contents respectively, provided in said substrate processing apparatus.

7. With respect to claim 4, a transport path (processing transport path proceeds form left to right in Figurer 8) is formed along said procedure and each of said plurality of inspection parts is arranged on an intermediate position in said transport path responsive to the inspection contents thereof.

8. With respect to claim 5, a processing condition may be changed in any of said plurality of processing parts on the basis of results of said inspection performed by said plurality of inspection parts (column 9, rows 24-28).

9. With respect to claim 6, the plurality of inspection parts include at least two of a resist thickness measuring part, a pattern line measuring part, a pattern overlay measuring part and a macro defect inspection part. Specifically, the prior art teaches inspection parts such as a thickness measuring part and a defect inspection (foreign matter testing device) (column 9, rows 12-25).

10. Examiner notes that the limitations drawn to the exact number of substrates transported to the inspection units are not structural limitations, but method limitations. The apparatus of Imahashi would be capable of transporting less than a whole set of processing parts to each of the inspection unit were the process sequence changed for any of the wafers (column 9, rows 25-28). The courts have ruled that a claim containing a "recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus" if the prior art apparatus teaches all the structural limitations of the claim. Ex parte Masham, 2 USPQ2d 1647 (Bd. Pat. App. & Inter. 1987).

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

12. Claims 9, 12, 17 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,256,204 to Wu in view of U.S. Patent No. 5,766,360 to Sato et al.

13. Wu discloses a substrate processing apparatus successively transporting a substrate between a plurality of processing parts (Figure 2, 20) thereby performing a prescribed processing on said substrate, comprising: a transport robot (50; column 6, row 67 – column 7, row 13) successively transporting said substrate between said plurality of processing parts along a prescribed procedure; and a plurality of inspection parts (column 5, rows 31-37) of different contents respectively, provided in said substrate processing apparatus.

14. Wu also teaches that the apparatus may comprise plural "inspection machines" (column 5, rows 31-37).

14. Wu also discloses the substrate processing apparatus as comprising: a procedure setting part (carrier processor, column 11, rows 27-31) capable of incorporating substrate transportation to said inspection parts in an arbitrary order position in said procedure; and a transportation control part (vehicle computer, column 11, rows 31-35) controlling said transport part to successively transport said substrate along said procedure set by said procedure setting part.

15. However, fails to teach said procedure setting part capable of setting transport of each of part or all of a set of plural substrates to be subjected to the same processing to a single inspection unit selected

from said plurality of inspection parts, so that at least one and less than all of said set of plural substrates are transported to each of said plurality of inspection parts.

16. Sato et al. teach inspection of a sampling of a batch of processed wafers for the purpose of shortening the inspection time (column 4, row 52 through column 5, rows 3).

17. It would have been obvious to one of ordinary skill in the art at the time the Applicant's invention was made to have the procedure setting part set transportation of the substrates so that a sampling of a batch of substrates is transported to each processing unit in Wu in order to shorten the inspection time as taught by Sato et al.

18. With respect to claims 9 and 20, Wu further fails to teach the inspection part including a plurality of inspection contents.

19. Sato et al. further teach preparing a plurality of inspection units in an inspection chamber for the purpose of improving throughput of the inspections (column 5, rows 1-3).

20. It would have been obvious to one of ordinary skill in the art at the time the Applicant's invention was made to have provided a plurality of inspection units in each of the inspection chambers Wu in order to improved the throughput of the inspections as taught by Sato et al.

21. Claims 10, 13-14, 18-19 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wu and Sato et al. as applied to claims 9, 12, 17 and 20 above, and further in view of U.S. Patent No. 6,313,903 to Ogata.

22. Wu and Sato et al. disclose the invention substantially as claimed and as described above.

23. However, the prior art fails to teach an apparatus, wherein each of said plurality of inspection parts is any of a thickness measuring part, a line width measuring part measuring the line width of a pattern, an overlay measuring part measuring overlay of said pattern and a macro defect inspection part, nor does Wu disclose any of said plurality of inspection parts is capable of performing resist film thickness measurement, pattern line width measurement and pattern overlay measurement.

24. Ogata discloses an inspection apparatus for inspection a resist pattern, comprising: a thickness measuring part measuring the thickness of a resist film, a line width measuring part measuring the line width of a pattern, an overlay measuring part measuring overlay of said pattern, a macro defect inspection part and other types of inspecting processes for the purpose of determining whether or not a resist pattern is acceptable (column 3, rows 16-19 and column 4, row 59 through column 5, row 25).

25. It would have been obvious to one of ordinary skill in the art at the time the Applicant's invention was made to have provided an inspection part capable of the claimed inspection processes in Wu in order to determine whether or not the resist pattern was acceptable as taught by Ogata.

Response to Arguments

26. In response to applicant's argument that neither Wu, Ogata or Imahashi teach a method wherein not all tests are performed on all of the substrates, a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art (as noted above). If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963).

27. Additionally, Applicant argues that Imahashi fails to teach, "transporting the substrates in such a manner that assures that each inspection unit has at least one substrate form the plural substrates transported thereto under any and all conditions. As Applicant pointed out in the previous argument Imahashi does in fact teach transporting each of the substrates to all of the inspection units. This teaching would clearly encompass "transporting at least one substrate to each of the inspection units".

Conclusion

28. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

29. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karla Moore whose telephone number is 703.305.3142. The examiner can normally be reached on Monday-Friday, 8:30am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Mills can be reached on 703.308.1633. The fax phone numbers for the organization where this application or proceeding is assigned are 703.872.9310 for regular communications and 703.872.9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703.308.0661.

km
June 6, 2003

GREGORY MILLS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700